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ABSTRACT

This study is the seventh in a series of reports from the Reading-to-Write Project, a collaborative study of students' cognitive processes at one critical point of entry into academic performance. This part of the study examines whether students could make more significant revisions in their writing if they were merely prompted to examine and improve their essays or if they were asked to transform their prose into an interpretive essay with a clear purpose. Subjects, 69 students enrolled in freshman composition, wrote essays after reading a passage describing time management techniques. After writing their essays, subjects in the experimental group were given a lecture on task representation and asked to turn their essays into interpretive essays that included a specific purpose. Subjects' think-aloud protocols were recorded. Fifty-seven of the students completed the revision assignment. Results indicated that students demonstrated different levels of metacognitive awareness and control over the revision process and that a gap existed between some writers' planning process and their writing performance. (Three tables of data and the Reading-to-Write study reference list are included.) (RS)

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Technical Report No. 26

THE EFFECTS OF PROMPTS UPON REVISION: A GLIMPSE OF THE GAP BETWEEN PLANNING AND PERFORMANCE

(Reading-to-Write Report No. 7)

Wayne C. Peck

May, 1989

This Report will appear as a chapter in *Reading-to-Write: Exploring a Cognitive and Social Process*, by Linda Flower, Victoria Stein, John Ackerman, Margaret J. Kantz, Kathleen McCormick, and Wayne C. Peck, to be published by Oxford University Press. An overview of the Study to which this Report refers can be found in CSW Technical Report No. 21, *Studying Cognition in Context: Introduction to the Study*.

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Preface to the Reading-to-Write Reports

> So I'm just gonna--I don't care, I'm just going to interpret them the only way I can interpret them. . . . Let's just put what the authors agreed on. *Authors agree* -- We'll just -- If at least two of them concur, we'll say they agree. *Authors in general agree that. . . .* But then they don't agree -- There's nothing you can say about this. . . .
>
> Can I leave it at that. . . . Oh give me a break, I don't know what I'm doing. I'm only a freshman. I have no idea what to do.
>
> Darlene, a first-semester freshman

Darlene's college assignment asked for synthesis and interpretation. The paper she turned in--a short, simplistic review of material from her sources--failed to meet her own expectations and her readers'. And yet, a chance to look at the process behind this unsophisticated product revealed serious thinking, a complicated, if confused, decision process, and a trail of unused abilities and discarded ideas--an active encounter with academic discourse that her teacher would never see.

The study presented here takes an unusually comprehensive look at one critical point of entry into academic performance. It shows a group of freshmen in the transition into the academic discourse of college, looking at the ways in which they interpret and negotiate an assignment that calls for reading to write. On such tasks, students are reading in order to create a *text* of their own, trying to integrate information from sources with *ideas* of their own, and attempting to do so under the guidance of a *purpose* they must themselves create. Because these reading-to-write tasks ask students to integrate reading, writing, and rhetorical purpose, they open a door to critical literacy. Yet this same interaction often makes reading-to-write a difficult process for students to learn and to manage.

In order to get a rounded picture of cognition in this academic context, the study looks at the thinking processes of these students from a number of perspectives, drawing on think-aloud protocols of students writing and revising, on interviews with and self-analyses by the students, and on comparisons of teachers' and students' perceptions of texts the students wrote. It attempts to place these observations within a broader contextual analysis of the situation as students saw it and the social and cultural assumptions about schooling they brought with them.

What this study revealed were some radical differences in how individual students represent an academic writing task to themselves--differences which teachers might interpret as a simple indication of a student's ability rather than a student's interpretation of the task. The students were often unaware that such alternative representations existed or that they might hold such significance. Some images of the task, for instance, such as those dominated by the goals of comprehension, summary, and simple response, offered little or no place for critical response, original synthesis, or interpretation for a rhetorical purpose.

The reading-to-write task students imagined for themselves also had a direct effect on performance: it affected the goals they set, the strategies they used, and the

ways they solved problems during composing. And it led to differences in teachers' evaluations of the texts--although, this study suggested, these evaluations may confuse the conventions of organization (e.g., use of topic sentences) with the writer's control of ideas. When students began to examine their options and attempt the more demanding task of interpreting for a purpose, certain students, whom we called the Intenders, showed important changes in their writing and thinking process. These changes, however, were not evident in the text and nor apparent to teachers. Finally, this study showed how students' images of the task were rooted in the students' histories, the context of schooling, and cultural assumptions about writing which they brought to college.

It is not surprising to find that some of the images students bring with them are at odds with the expectations they encounter at a university. However, when the expectations for "college-level" discourse are presented in oblique and indirect ways, the transition students face may be a *masked* transition. That is, the task has changed, but for a number of reasons, the magnitude and real nature of this change may not be apparent to students, even as they fail to meet the university's expectations.

One of the key implications of this study is that reading-to-write is a task with more faces and a process with more demands than we have realized We see students thinking hard and doing smart things, even when they misgauge their goals or their written text fails to meet certain standards. This close survey of the cognitive and social landscape of reading-to-write in a college class gives one added respect for the students in this transition and for the complexity and sophistication of the "freshman" task as they face it.

The Reading-to-Write Project was carried out as a collaborative effort at the Center for the Study of Writing, at Carnegie Mellon. We designed the study to create a range of alternative perspectives on the process of reading-to-write and on the way cognition is shaped by the social context of school. The following technical reports present the design and collaborative history of the study; analyses of the cognitive processes we observed, of the texts, and of students' perceptions of both; and a set of conclusions, from different theoretical perspectives, on how students manage this entry into academic discourse:

Reading-to-Write Report 1.
(CSW Tech. Report 21)

Studying Cognition in Context: Introduction to the Study.
Linda Flower

Reading-to-write is an act of critical literacy central to much of academic discourse. This project, divided into an Exploratory Study and a Teaching Study, examines the cognitive processes of reading-to-write as they are embedded in the social context of a college course.

Reading-to-Write Report 2.
(CSW Tech. Report 6)

The Role of Task Representation in Reading-to-Write.
Linda Flower

The different ways in which students represented a "standard" reading-to-write task to themselves led to marked differences in students' goals and strategies as well as their organizing plans. This raised questions about the costs and benefits of these alternative representations and about students' metacognitive control of their own reading and writing processes.

Reading-to-Write Report 3. (CSW Tech. Report 22)

Promises of Coherence, Weak Content, and Strong Organization: An Analysis of the Student Texts. Margaret J. Kantz

Analysis of students' Organizing Plans (including free response, summary, review and comment, synthesis, and interpretation for a rhetorical purpose) also revealed a hybrid plan in which certain coherence conventions gave the promise of synthesis while the paper's substance reflected a simpler review and comment strategy. Both students and teachers, it appeared, may sometimes confuse coherence strategies (for text) with knowledge transformation strategies (for content).

Reading-to-Write Report 4. (CSW Tech. Report 23)

Students' Self-Analyses and Judges' Perceptions: Where Do They Agree? John Ackerman

Any writing assignment is a negotiation between a teacher's expectations and a student's representation of the task. Students' Self-Analysis Checklists showed a strong shift in perception for students in the experimental training condition, but a tellingly low agreement with judges' perceptions of the texts.

Reading-to-Write Report 5. (CSW Tech. Report 24)

Exploring the Cognition of Reading-to-Write. Victoria Stein.

A comparison of the protocols of 36 students showed differences in ways students monitored their comprehension, elaborated, structured the reading and planned their texts. A study of these patterns of cognition and case studies of selected students revealed both some successful and some problematic strategies students brought to this reading-to-write task.

Reading-to-Write Report 6. (CSW Tech. Report 25)

Elaboration: Using What You Know. Victoria Stein

The process of elaboration allowed students to use prior knowledge not only for comprehension and critical thinking, but also for structuring and planning their papers. However, much of this valuable thinking failed to be transferred into students' papers.

Reading-to-Write Report 7. (CSW Tech. Report 26)

The Effects of Prompts Upon Revision: A Glimpse of the Gap between Planning and Performance. Wayne C. Peck

Students who were introduced to the options of task representation and prompted to attempt the difficult task of "interpreting for a purpose of one's own" on revision were far more likely to change their organizing plan than students prompted merely to revise to "make the text better." However, the protocols also revealed a significant group of students we called "Intenders" who, for various reasons, made plans they were unable to translate into text.

Reading-to-Write Report 8. (CSW Tech. Report 27) — **Translating Context into Action. John Ackerman**

One context for writing is the student's history of schooling including high school assignments and essays. Based on protocols, texts, and interviews, this report describes a set of "initial reading strategies" nearly every freshman used to begin the task--strategies that appear to reflect their training in summarization and recitation of information. From this limited and often unexamined starting point, students then had to construct a solution path which either clung to, modified, or rejected this a-rhetorical initial approach to reading and writing.

Reading-to-Write Report 9. (CSW Tech. Report 28) — **The Cultural Imperatives Underlying Cognitive Acts. Kathleen McCormick**

By setting reading-to-write in a broad cultural context we explore some of the cultural imperatives that might underlie particular cognitive acts. Protocols and interviews suggest that three culturally-based attitudes played a role in this task: the desire for closure, a belief in objectivity, and a refusal to write about perceived contradictions.

Reading-to-Write Report 10. (CSW Tech. Report 29) — **Negotiating Academic Discourse. Linda Flower**

Entering an academic discourse community is both a cognitive and social process guided by strategic knowledge, that is, by the goals writers set based on their reading of the context, by the strategies they invoke, and by their awareness of both these processes. As students move from a process based on comprehension and response to a more fully rhetorical, constructive process, they must embed old strategies within new goals, new readings of the rhetorical situation. However, for both social and cognitive reasons, this process of negotiation and change that academic discourse communities expect may not be apparent to many students for whom this becomes a confusing and tacit transition.

Reading-to-Write Report 11. (CSW Tech. Report 30) — **Expanding the Repertoire: An Anthology of Practical Approaches for the Teaching of Writing. Kathleen McCormick *et al.***

One important implication of this entire study is that students themselves should come into the act of examining their own reading and writing processes and becoming more aware of cognitive and cultural implications of their choices. This set of classroom approaches, written by teachers collaborating on a Reading-to-Write course that grew out of this project, introduces students to ways of exploring their assumptions and alternative ways of represent aspects of the task.

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THE EFFECTS OF PROMPTS UPON REVISION: A GLIMPSE OF THE GAP BETWEEN PLANNING AND PERFORMANCE

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One way of viewing the findings of this study is to picture yourself as a teacher confronted with 72 revisions of a previous writing assignment. How does one begin? What assumptions do we, as teachers, bring to a revision assignment? Do our assumptions match those of our students? This study addresses these questions and makes two observations regarding how students in college revised a written assignment. First, the writers we observed demonstrated differing levels of "metacognitive" awareness and control (Brown, 1984) over the revision process. At one end of the spectrum, we observed writers spending considerable time in their think-aloud protocols actively building elaborate networks of plans and goals and tests, which they monitored as they produced their final drafts. At the other end of the spectrum, we saw writers who were taking a very different approach to the task of revising their assignments. These writers showed little, if any, awareness of multiple goals and options for the assignment. Instead, they immediately set to work applying a far more limited set of revising strategies focusing almost exclusively on sentence level changes. Secondly, after comparing the think-aloud protocols and the finished texts of our writers, we observed a gap in some of our writers between their planning process and their writing performance. Some of the writers explicitly "intended" in their protocols to transform their knowledge in significant ways, but for a number of reasons were unable in their final drafts to carry out their plans or have them acknowledged by the judges.

Procedure

The study to this point has shown meaningful differences in how students represented a common task to themselves. The various ways students represented the task raised an important set of questions. Could students make significant changes in their writing, if they were prompted 1) to examine their task representation and 2) to attempt the demanding task of transforming their prose into an interpretive essay with a clear purpose. Moreover, how do students respond to alternative representations and to prompts to change their writing plans? Given the assignment, did the students perceive the prompt to be a real alternative? The revision assignment offered the opportunity to see how students used the different prompts to revise and helped assure us that simply revising, regardless of the prompt, was not responsible for the changes the student writers made.

The 69 students were randomly divided within classes into experimental and control groups with 36 students in the experimental condition and 33 students in the control condition. The students in the experimental group were presented with a 40 minute lecture on task representation, asked to complete the S-AC procedure, and then were given the assignment "to revise their original essay turning it into an interpretive essay that fulfilled a specific purpose." The students in the control group did not attend the lecture and were simply asked to revise their essays making them "better." When the revisions were collected, 57 students of the original 69 students completed

the revision assignment (31 students from the experimental group and 26 students from the control group).

As discussed in Report 1, the prompt embedded in the original time management task was intended to be an open-ended invitation for students to think and to write an interpretive essay about time management. In the second phase of the writing assignment, we wanted the students to revise their papers in order to make sure that their essay was an "interpretive" essay. The experimental prompt was broad ranging in that its purpose was to make students aware of their options for transforming their knowledge. In the lecture the students in the experimental group were presented with the various ways their fellow students had represented and completed the original assignment. By means of the S-AC procedure, students assessed the strategies they had used as they wrote about time management. Our aim in presenting such a broad ranging and open ended prompt as the "interpret" prompt was exploratory. Our main goal was not to design a prompt that was unambiguous and thus ideal for purposes of assessment (Ruth & Douglas, 1984). Our purpose instead was to spark students' thinking processes in order to observe the various ways students represented the writing assignment. We were interested in investigating the students' ability and willingness to change their prior representation of the task by restructuring their knowledge. We wanted to know if a prompt to revise a draft into an interpretive essay would lead more writers to transform their knowledge by changing their organizational plan than writers who were merely asked to make it better.

Key Observations

Observation One: Negotiation Versus Standard Strategies

As we began to examine the protocols of the students revising their time management essays, we discovered that writers were revising their papers in different ways depending upon how they represented the task of revision to themselves. One group of writers, whom we ultimately called, "the Negotiators" (see Table 1), demonstrated by their comments a conscious awareness of alternative ways of accomplishing the assignment. This group of writers pursued a variety of tasks such as: reading and rereading both the instructions for the task and their original essays, considering what the assignment asked them to do, creating plans, goals, and tests for their revisions. As we shall see, these writers demonstrated an awareness of a range of options for completing the assignment and indicated by the strategies and goals they selected varying degrees of "metacognitive" control over their thought processes.

A second group of writers, whom we called the "Re-readers," approached the same task in a distinctly different way. Like the writers Bridwell (1980) observed, who failed to pause before they revised, the "Re-readers," in our study, did not spend their time planning or considering their options. Instead, they read the instructions for their task and immediately set to work applying a rather uniform set of sentence-level revision strategies. These students re-read their essays, working on sentence level problems, primarily spending their time correcting their syntax and concentrating on making their essays "sound better." As we shall see, the comments of this group of writers revealed few, if any, signs of a "metacognitive" awareness and likewise, paid little attention to the instructions of the particular assignment. For these students, revision is a familiar task. One student remarked in his protocol, ". . . all revisions are alike. . . you clean up what you messed up."

Unlike the "Negotiators," who consciously constructed a task representation for their revision assignment, the "Re-readers" came to the assignment with a set of local revision strategies, which they simply applied to the task at hand. The differences between these groups of writers led us to further examine the various ways in which students carried out their revisions.

Distribution of Revisers n = 57

	Negotiators	Re-readers
Experimental	26	4
Control	16	11

Table 1: Distribution of Revisers: Negotiators vs Re-readers

Observation Two: A Gap between Planning and Performance

Our second observation is best expressed in the form of a question, "Do the revised essays we receive, as teachers, ever fully reflect the wealth of critical thinking that went into creating them? We found writers in our study who could not translate their sophisticated planning into equally sophisticated written texts. A gap existed between these writers' planning process and their writing performance. We identified as "Intenders" a group of 35 students in the original Negotiators group. These writers appeared to be asking the same kinds of questions and making similar strategic moves in their planning as students who were successful in transforming their knowledge for a specific purpose, but, who, unlike their counterparts, were unable to translate their plans and intentions into finished products valued by the judges. The "Intenders" were clearly trying to implement a rhetorical plan as they revised, but, on the whole, were ineffective in communicating their intentions to their readers.

This gap between planning and performance led us to speculate that some writers are knowledgeable and in some sense skillful in planning a revision but, for a number of reasons, do not translate their complex planning processes into equally sophisticated revisions. We wanted to take a closer look at some of the reasons why the "Intenders' "plans either got lost in the writer's production of the text or failed to draw the reader into the writer's purpose for the discourse. In order to explore this gap between planning and performance, we will first examine the texts produced by the students, noting the changes the students made in their organizing plans from the original draft to the revision, and then, proceed to examine the protocol data focusing upon the students' writing processes.

The Effect of Prompts upon Organizing Plans

The time management essays were read and evaluated by the judges and assigned to one of seven categories depending upon how the writers planned, organized, and wrote about the material (See Kantz, Report 3).

0. Summarize
1. Review-and-Comment
2. Isolated Main Point and/or Conclusion
3. Frame
4. Free Response to the Topic
5. Synthesis
6. Interpretation for a Purpose

As stated earlier, we wanted to know if even a brief introduction to task representation and the prompt to revise a draft into an "interpretation with a purpose" would lead more students to change their organizing plan than students who were merely asked to revise their text and make it "better." The prompts themselves were presented in the lecture as a set or package of directions, options and information that would be helpful to a writer in transforming information to accomplish a purpose. In the case of the students in the experimental section, the students were instructed to re-read their original essay and transform it into an "interpretive" essay that fulfilled a specific purpose. The students in the control group were simply asked "to revise their essay making it better."

How did the prompts affect the revision processes of the students in our study? Did the "Interpret" and the "Better" prompts lead students to do different tasks? Did either prompt encourage students to restructure their initial paper?

Distribution of Revisions n= 57

Participants who changed their text plan	34
Experimental	20
Control	14
Substantial changes	23
Experimental	16
Control	6

Table 2: Distribution of Revisions: Changes

Comparing the effects of the two prompts , we found the "Interpret" prompt only marginally more powerful than the "Better" prompt in encouraging writers to change their organizing plan to another plan. Roughly two-thirds (65%) of the writers in the "Interpret" condition (See Table 2) changed their organizing plan, while a little over one-half (53%) of the writers in the "Better" condition changed their organizing plan.

Statistically, the difference between the power of the prompts was not significant. But, we asked, does this tell the whole story of the differences between the prompts? Measuring text change is a gross measure focusing only on visible changes in the text and, as such, did not fully account for a number sensible reasons why people did not change their organizing plans. As we shall see when we analyze the protocol data, a number of factors influenced both how the students carried out the task of revising their original essays and how the judges evaluated the students' final text products (see Kantz, Report 3). While the differing effect of the two prompts is not that pronounced when only the text products are analyzed, powerful differences between the prompts emerge when the protocol data is taken into account.

Substantial Changes

While measuring the percentage of writers who changed their text plan is helpful in getting an overall sense of how willing or able the writers in our study were to restructure their ideas, such a measure is limited, if we want to know the various ways students responded to the prompts to revise. What does it take to encourage a student to consider a substantial reframing of the ideas of an original essay? A more precise way of examining the changes writers made in their organizing plans is to focus on the instances in which a writer made a decision to significantly restructure the way the information was originally represented in the text. In order to distinguish substantial changes in text plans from less rigorous reworkings of the texts, we developed a set of distinctions that helped discriminate between significant and non-significant changes in organizing plans. We treated papers falling within categories 0 -3 as a single category. Our rationale for this decision was the observation that changes within these categories of text plans could be seen simply as variations on the theme of summarizing Since changes within a summarizing scheme did not involve significant restructuring of the information of the essay the way, for instance, changing a text plan from a free response to an essay with a controlling concept involves the writer in transforming prior knowledge, we defined as "substantial" only those changes that involved significant changes in the text plan. For example, a change from a summary to a frame (0-3) was evaluated as "non-substantial" when compared with a change from a summary to a controlling concept (0-4).

Using this distinction to distinguish between substantial and non-substantial changes in organizing plans, when the writers who were assigned the "Interpret" prompt are compared to those writers who were assigned the "Better" prompt, 16 writers prompted with "Interpret" made substantial changes in their organizing plan while only 6 of those writers prompted with the "Better" changed their plans in significant ways. The differences was found to be significant at a .02 level. The following table shows the number of students who in the view of the judges changed their essays and the number of students who were judged to have made substantial changes in their original draft.

Protocol Analysis

Task Representation

While analyzing texts provides a good "bottom line" for writing performance, such an analysis sheds little light on how an individual writer approached the assignment and went about the process of deciding how to revise a draft. In order to gain access to this information, protocols were taken of the entire population of writers as they revised their original essay. As shown in Table 2, writers can be categorized according to the ways they approached the revision task as: The ways the writers approached and completed the revision task can be categorized in the following manner:

intenders, transformers, low effort strategies, and re-readers. A Kappa coefficient (Cohen, 1968) was used to assess inter-rater reliability of 3 judges evaluating 25 protocols. The Kappa coefficient for this coding scheme was .93.

Approaches to Task Representation

		n=57	%
Negotiators	Intenders	28	49.1
	Transformers	7	12.3
	Low Effort	7	12.3
	Re-readers	15	26.3

Table 3: Approaches to Task Representation

Transformers

Dan's protocol is representative of a group of writers whom we called the "Transformers." In the estimation of the judges, the "Transformers" were able to transform their original papers into essays with an original purposes directed to specific audiences.

Dan (Experimental 5-6)

> "interpret...let me check my notes. . . that means I"m going to have to change this stuff around. Originally, I read and looked for the main topic . . . my plan was a topical theme paper with a central idea, a topic sentence and an introductory paragraph. I didn't have an audience in mind because this was general information for everybody. In the revision I'm going to select information which supports my theory. . .also put in more opinions. I'll gear it to a certain kind of person. My purpose will be to argue with a bunch of freshman."

"Transformers" were students who made plans to change their essays in significant ways above the sentence level. They read and re-read the instructions for the task and thought about issues such as: the intentions of their first draft, the audience they were addressing, what was going "right" and what was going "wrong" with their first attempt. "Transformers" acted upon their plans by changing their essays and having them recognized by the judges as "interpretive" essays.

Intenders

Another group of writers whom we called the "Intenders" made similar plans to the plans made by the "Transformers" but for a number of reasons did not have their final products evaluated by the judges as being "interpretive" essays. For the "Intenders," the prompts or written instructions that accompanied the task had a significant impact upon the way these writers envisioned the task of revising their papers. The "Intenders" read, re-read, and reflected upon the instructions of their assignment. Certainly, not all the "Intenders'" plans were as lucid as the excerpt from Dan's protocol, but all "Intenders" did share these characteristics: they alluded to the intentions of the their original draft, they mentioned and frequently changed the audience they were addressing, they evaluated to varying degrees what was going "right" and what was going "wrong" with their essay, and they made plans to change their essay. These writers demonstrated an awareness of options regarding possible organizing plans and created explicit plans for revision which they monitored to differing extents throughout their protocol, but, in the eyes of the judges, did not substantially revise their final text. Ed's plans are an example of a writer who intended to change his essay but whose effort was not recognized as an interpretive essay by the judges.

Ed ("Experimental" 1-1)

> "according to them I guess this (refers to his original paper) is a summary. I guess. . . I guess they want something different . . .something with my opinion in it (refers to assignment) They want me to have a purpose. I'll make it into an argument with my roommate. . . that will be my purpose. . . I'll use the same material and make it into an argument I'm having."

Clearly, Ed intended to change his organizing plan from a summary to an argument with a purpose but for reasons which we will discuss later was unable to communicate his intentions to his readers.

Since the Intender's group comprised 49% of those writers who completed the revision assignment, an obvious question is whether the "Interpret" or "Better" prompt had differing effects upon the "Intenders" group. Assessing the impact of the "Interpret" and "Better" prompt upon the "Intenders" group, the results showed 18 of the writers who intended to change their essays were from the "Interpret" group.

Re-readers

While the prompts "Better" and "Interpret" had a significant impact upon the revision process of the "Intenders," the same prompts had a marginal effect upon the "Re-readers." A group of 15 writers in the study began their revision simply by reading the instructions for the task in a single pass, and then, proceeded to work through the original essay in a local, sentence by sentence, problem by problem basis. Unlike the "Intenders," the "Re-readers" tended to show little awareness of possible options for altering their text plan and did not pause to make any explicit plans or goals for their revision. An overriding concern for many of the writers in the Re-readers was the need to manage their time well. A good example of this group's perception of the revising task is summed up in the protocols of Bob ("Control" 2-2) and Jill ("Control" 4-4).

"this is just a revision. . . gotta get it done fast so I can study for the chemistry test"

or

" revisions are just not that important. . . teachers make up their minds on the basis of the first draft anyways."

The majority of the "Re-readers'" revisions were finished when the last sentence was checked and edited by the writer. Only 3 writers paused long enough to reread their finished product. When the effect of the two prompts is examined, 8 of the 15 "Re-readers" were given the "Better" assignment.

The Low-Effort Group

A group of 7 students read and frequently reread the instructions for the task, demonstrating an explicit awareness of possible options for restructuring their essays , yet, chose, instead, to revise their essays using low-effort strategies, concentrating on local revision. Indicative of this approach were the remarks of Rick (Experimental" 2-2):

" the instructions are telling me to change my essay into an interpretive essay that fulfills a purpose. . . that's hard. . . that will be very hard to do. I'll need to shift the material I need my lecture notes. . . (rereads his lecture notes verbatim) I still don't know. I think I'll stick with what I got."

Writers in the "low effort group" were cognizant of different alternatives to the original way they had dealt with the material but under the pressure of time or in the face of difficulty opted instead to carry out a simpler task.

Discussion

Applebee (1984) has noted, " Writing activities take their shape from the context in which they are embedded--we need studies which begin to explore the interactions between writing activities and the goals and classroom constraints." This study has attempted to examine the process of revision within the context of a reading-to-write college assignment. The findings of this study can help us describe some of the more problematic facets of the revision process, namely, some of the ways a reviser's cognition is shaped by the situation in which it occurs. We wanted to observe "cognition in context" in order to examine how writers represented the task of revision to themselves when given different prompts to revise. What we found challenged some of our assumptions about the revision process and how cognitive processes are mediated in the actual context of instruction in school.

Writers revise differently in accordance with their goals, their knowledge, their detection strategies, and their overall writing competence. One tempting way to explain differences in revising behaviors is to assume that individual differences in the use of particular revision procedures is a function of an individual writer's skill in revising. For instance, mature writers are assumed to be more liable to revise "globally," while developing writers are assumed to prefer simpler, more "local" strategies to revise. We found something quite different. Just as Faigley and Witte (1981) identified the importance of "situational variables," such as, how good the text is to begin with, how much this writer knows about this topic or genre, or how high the standards for success, so too, we observed the importance of the writer's representation of the situation in which the particular revision was taking place. The assignment we gave our writers was certainly not the only one they were attempting to complete. From

their comments there were math tests, chemistry quizzes, and history papers competing for our writers' time, which influenced the ways the writers represented not only the importance of the task, but also, the ways the task would be completed. Our findings encouraged us to find ways to explore and to begin to account for "situational " variables and their effect upon the process of revision. In light of the situational variables and the variety of ways that students approached the task of revising their essays, we began to view the revision process as a "transaction" between a writer's process and the situation in which the writing is being done. In fact, the protocols suggested that many students were "negotiating" their task, their text, and their situation as they planned and revised.

Negotiation within an Instructional Setting

Revision begins, in an instructional setting, with the assumption that a student's writing needs to be changed, transformed, in some way, made "better." Revising a text is a "collaborative act" in that the writer and the instructor share a common goal of working to improve the student's writing. We found that the majority of our students (the "Intenders" and the "Low Effort" writers) approached the task of revision as "negotiators," aware of the evaluative context of writing for instructors in school, and so, conscious of mediating their representation of the task and text with their perceptions of what the instructors wanted. Phrases in the protocols, such as, " they want this" or "if they want a purpose... I'll change my first paragraph but I want to keep my second paragraph" were common expressions of students negotiating in their minds what features of their essays they wanted to retain and what features they were willing to change. Moreover, many students frequently pointed out in their protocols the time constraints of writing within an academic environment and the need to manage their time effectively. More often than not, these writers solved their time problems by applying context-sensitive strategies for revisions. Al reported in his protocol,

> " let's see I've got a history paper to write and this paper doesn't count as much so I am only going to go through and fix only the rough parts."

Other students, like Trent, showed an awareness of more complicated procedures for revision, and even contemplated doing "global" revisions, but, in light of their representation of the assignment, chose to do an easier task,

> "I could redo this whole thing. . . and show the reader the places where the sources don't agree and make more sense of what I am saying. I could make my audience a confused reader who just wants to know more about how to manage time but . . . but I'm pretty happy with what I have written. . . I don't think I will change my process for this assignment it is probably not worth the effort."

Since many of the writers were aware that they could attempt more challenging revisions but chose not to, we became interested in the various ways the particular context affected the reviser's perception of the task. Taking such factors into consideration, we began to appreciate how complex and situational an assignment to revise really is and the myriad ways a situation shapes cognition and the revised product.

Negotiating the Task and Text

The analysis presented thus far has shown that the "Interpret" prompt was generally more powerful than the "Better" prompt, in that, it produced more text change between drafts and encouraged a greater percentage of students to make significant

changes in their revised essays. Moreover, the protocol data gave support to the greater power of the "Interpret" prompt in that it led an even larger group of writers to make plans to change their drafts.

A critical distinction regarding the power of any prompt to effect change in students' process and performance is the extent to which a particular prompt either cues a student to perform tasks which the student already knows how to do (Applebee, 1981) or evokes in the student's consciousness "problem-solving" modes of thought (Newell & Simon, 1973). Given the fact that the majority of writers who retained their original organizing plans were assigned the "Better" prompt, we wanted to know what it was about the "Better" prompt that led students not to change their text plan and, instead, consistently apply local revision strategies to their texts rather than global ones.

The protocol data revealed that the answer was due, in part, to the student's interpretation of what the prompt implied about their original draft. Don's and Sandy's remarks after reading the task instructions to make their essay "Better" are illustrative of the ways that a number of students represented the task.

Don "Control" 3-3

". . . make it better means I must be doing it right.. . .

After reading the instructions and her original essay,

Sandy's "Control" 4- 4

". . . this is O.K. . sounds like I wrote it under the pressure of time which I did...my sentences are too long and involved. . . I think I will do some dusting and cleaning and tighten the structure a little. . . that's all I need to make it better"

For both Don and Sandy, "make it Better" did not prompt them to further problem-solve and come up with new ideas. Instead, the "Better" prompt acted to confirm their original purpose and the act of revising became the application of a series of corrective, sentence-level changes. In Sandy's case, the "Better" prompt cued a set of strategies over which she had considerable control. Her revision was completed within six minutes.

While the "Better" prompt was general and unspecified, the "Interpret" prompt which included the S-AC procedure and the lecture was more focused and specific in that it suggested to students that certain features or aspects of their essays needed to be changed. The "Interpret" prompt tended to elicit more instances of problem-solving behavior than the "Better" prompt. The protocols showed that more than half of the students in the Interpret condition paused to reread the instructions and either elaborated on what they thought "Interpret" meant or searched their lecture notes to find a clue about what they should do and formed a plan of action. Only 24% of the writers prompted with the "Better" prompt made similar plans. Plans were defined as a writer's attempt to change a global feature of the text or address a different audience or change the specific way the information on time management was represented When both the final texts and the process data are taken into consideration, the "Interpret" prompt consistently was more powerful in engaging students in problem-solving activities and in encouraging students to change the ways they organized and represented their knowledge.

The Gap Between Planning and Performance

Britton (1975) noted that writing is a "purposeful" activity through which writers carry out plans and accomplish goals. Focusing upon the ways writers, or in our case, revisers negotiated their task, text, and situation provided us with a unique window through which to examine how writers' purposes differed. Given our analysis of the protocol data, we wondered whether a writer's final text is really an adequate guide to the presence or absence of rhetorical purpose in a writer's own thinking? We hypothesized that students learn to manage different facets of the composing process in different stages and one reason for the gap between planning and performance may lie in the students' struggle to let their purpose control the text. Throughout the protocols, we found evidence of students struggling with varying degrees of success to create rhetorical purposes and integrate them into their compositions. The following segments of protocols are good examples of the struggles of some of the "Intenders" who made plans to turn their essays into "interpretive" essays that fulfilled a specific purpose, but whose efforts fell short in the eyes of the judges.

Those whose Plans got Lost

Joel is representative of a group of writers who read and reread both the instructions of the assignment and the original essay and then proceeded to make explicit plans for revision.

Joel "Experimental" 3-3

> "the problem is none of these people agree about time management and we are supposed to be interpreting what they think in a comprehensive way. . . it just doesn't fit together. . . I could organize it by picking the ones I agree with but that wouldn't be comprehensive. I'll try to find some points of agreement to start off and then I'm going to go through and praise what I like and criticize guys like Lakein. . . that way I'll be interpreting them to my audience."

In his protocol, Joel correctly diagnosed the tension between the fact that the sources do not agree and the need, stated in the instructions, "to be comprehensive." He remarked, "it just doesn't fit together." He proceeded to consider his options and devised a plan to find an organizing concept based on "points of agreement." Finally, he planned to add his personal evaluations. But, as Joel moved to translate his planning into his revised text, he reread his former organizing concept in his original essay and decided that he liked the sense of what he had written earlier over his new plan. His plan was abandoned as he chose to conserve the structure of the text he had already written (see Ackerman, Report 8). This preference among many of our writers to conserve the structure of a former text rather than to transform its organization resulted frequently in revision plans being set aside. These writers consciously or unconsciously opted to carry-out the simpler task of conserving their original text plan rather than pursuing the more rigorous option of transforming the way they represented their knowledge.

Those whose Plans did not Accomplish the Desired Effect

Another group of students also made plans to change their organizing plans for their essays.

Liz "Experimental" 1-3

> " at first all I wanted to do was summarize and touch all the bases because all I could see they had in common was that planning was important to time management. (rereads notes from lecture) What I need to do is show I have a purpose and explain it to them This time I am going to make planning my main topic and show other freshman how they should plan their time to be a success. . . I can still use a lot of my old material.

Liz's plan shows that she is aware that her original organizing plan needs to be changed from a summary to a more purposeful audience-based account. She designates "planning" as her main topic and "freshmen" as her audience. But, as Liz begins to translate her plans into action she makes the judgment "its not working. . . this stinks. . ." and she abandons her plan. These writers were unable to carry out their plans to their satisfaction and decided, instead, to retain what they had originally written. For many writers, "global" revision is a high-risk enterprise for which there is diminishing commitment as the difficulty increases.

Those whose Plans were not Recognized

Another group of writers made plans to revise their essays but did not have their essays recognized as "interpretive" essays by the judges. Ed is a good example in that he makes an explicit plan.

Ed ("Experimental" 1-1)

> "according to them I guess this (refers to his original paper) is a summary. I guess. . . I guess they want something different. . . something with my opinion in it (refers to assignment) They want me to have a purpose.
> I'll make it into an argument with my roommate. . . that will be my purpose. . . I'll use the same material and make it into an argument I'm having."

Ed's plan is sound in the sense that he recognizes that his summary needs to be changed. He makes a plan to argue with his roommate, but, as he turns to put his plan into writing, he neglects to inform the reader of his new purpose. Missing from Ed's revised text are the explicit references to his audience or the signals that he is arguing rather than presenting information. On the whole, the organization of his text remains the same with only a short phrase, "but in my opinion," inserted to signal the reader that he is arguing. Writers in Ed's group frequently showed in their protocols signs that their process was changing but failed to translate those changes into explicit prose.

Another group of writers whose plans showed indications of rhetorical purpose, but whose finished products were not recognized by the judges as being "interpretive essays," were the ones whose texts originally fell within the 0-3 range of essays. These writers' plans are similar to those of Joan's.

> "I want to show them that time management matters and can make a difference if a student manages his time well. My topic is OK but it really doesn't have that much to do with the rest. . . I need to find a way to tie Lakein and James in."

As Joan revises, she returns occasionally to her plan. Like Ed, though, she fails to signal the reader that she has a specific audience in mind or that she is attempting to make changes in the way she originally organized the material. While she was successful in finding a way to relate Lakein and James to her original organizing concept, the final result is a variation on the "review and comment" strategy rather than a major transformation in the way she represented the information.

Neither Ed's nor Joan's plans called for specific local changes to be made in their text and gave no clue how the writers were actually planning to put their plans into operation. Instead of elaborating their plans with specific strategies for making changes, Ed's and Joan's plans were general, directional statements about the way they would like their essays to turn out.

Writers Revise Differently

This study demonstrates that writers revise differently depending upon how they represent or "negotiate" their task, their text, and their situation. After examining the protocols of writers planning to revise, one cannot fail to be impressed by the extent to which a writer's represention of the task, text, and situation influences the goals, strategies, and criteria that writers bring into play. Writers' representations varied from relatively simple generic representations of "school" tasks to complex multi-faceted representations fashioned from writers' inferences about the cognitive, social, and rhetorical aspects of the task.

Given the fact that the process of revision within an instructional setting is complex and situational, we observed that revision is not merely a cognitive but also a complex social and political act. Writers, in an educational context, are always being asked to juggle priorities and serve different masters. Not surprisingly, students consciously choose strategies that are efficient and sensible, yet not always as rigorous as teachers would prefer them to use.

Finally, learning to revise within an academic context is a tricky business to negotiate for a freshman writer. What is a student to make of the prompts and goals that teachers give them--"interpret," "make it better." We found a sizable proportion of writers still developing a picture of what teachers mean when they make such requests. Often we found a mismatch between what our readers expected and what our writers delivered as final texts. In many of these cases, we were pleased yet disturbed to note that our writers' processes (as revealed in their protocols) were consistently more elaborate and sophisticated than their written products.

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